DOCUMENT RESUME

ED 406 032 PS 025 256

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TITLE Scripts for Learning: Reflecting Dynamics of Classroom Life.
PUB DATE 96
NOTE 11p.; In: Australian Research in Early Childhood Education. Volume 1, 1996; see PS 025 254.
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Foreign Countries; Interviews; Longitudinal Studies; Metacognition; Peer Relationship; Primary Education; *School Culture; *Student Adjustment; Student Attitudes; Young Children
IDENTIFIERS Routine Events; Scaffolding; *Scripts (Knowledge Structures)

ABSTRACT

This study used a longitudinal qualitative approach to study children's acquisition of scripts for school learning in New Zealand. Participating in the study were four boys and four girls, 5 years of age. Children were observed in regular class activities in their first term in a new entrant classroom and 1 year later. Informal and semi-structured interviews were conducted to elicit children's perceptions of learning tasks. The theoretical constructs of scripts, metacognition, and peer scaffolding provided the theoretical framework for the data reduction process. Results indicated that school beginners viewed learning in terms of procedural matters and classroom routines. While the children's focus on procedures seemed to limit their awareness of learning, it did appear to facilitate their attempt to give and receive scaffolding. There was little awareness of the self as learner, and learning as a concept was largely associated with the teacher. In their second year, children's perceptions of learning reflected changes in classroom dynamics and teaching styles and a greater awareness of learning content and strategies. The findings suggested that children look for patterns in school and construct scripts for school learning which reflect the changing dynamics of classrooms, and that peer interactions provide opportunities for developing relationships which support emergent forms of scaffolding, including metacognitive assistance to peers. Results suggested that teaching practices need to support the construction of scripts for learning and not simply scripts for routines and procedures. (Contains 25 references.) (KDFB)

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SCRIPTS FOR LEARNING: REFLECTING DYNAMICS OF CLASSROOM LIFE

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ABSTRACT

This study focuses on children's acquisition of scripts for school learning. A longitudinal qualitative approach was adopted to study five year old children's first term in a new entrant classroom and their classroom experiences one year later. Children were observed in regular class activities. Informal and semi-structured interviews were conducted to elicit children's perceptions of learning tasks. School beginners viewed learning in terms of procedural matters and classroom routines. In their second year, children's perceptions of learning reflected changes in classroom dynamics and teaching styles and a greater awareness of learning content. Results suggest that teaching practices need to support the construction of scripts for learning and not simply scripts for routines and procedures.

INTRODUCTION

In New Zealand, children commence school on or near their fifth birthday. This continuous entry policy means that children enrol in classrooms in which more experienced learners are present. In this context, the process of how children adjust to school learning is likely to involve interactions with more experienced peers. Accordingly, it is likely that children's perceptions of school learning will reflect their incidental experiences with peers in addition to adult-structured learning experiences. From this perspective, the focus of the present study addressed two questions: (1) how do school beginners perceive the role of school learner, and (2) how do dynamics of classroom life affect changing perceptions of school learning?

Contemporary cognitive perspectives on learning which emphasise the social and situated nature of learning (e.g., Forman, Minick & Stone, 1993; Rogoff, 1990) initially guided our decision to adopt a qualitative approach. Research in early childhood classrooms from anthropological and ethnographic perspectives (e.g., Klein, Kantor & Fernie, 1988; Hatch, 1990; Tammivaara & Enright, 1986) indicates that, in order to understand children's early school experiences on their own terms, it is important both to observe children in the natural classroom setting and to talk with them about their learning experiences. Several strands of cognitive research which related conceptually to the focus of the study further supported our major methodological orientation. In each of these areas, limitations of earlier work emphasised the value of adopting procedures which would capture the culture of a new entrant classroom and enable us to depict the richness of young children's early school experiences.

During the 1980s, script theory was applied to the study of young children's social understandings. In this work, the concept of script referred to the schematic representations of repetitive, culturally-defined social events acquired by young children. Fivush (1984), for example, found that young children rapidly acquire scripts about routine events in classrooms. Script studies have been criticised because of their tendency to ignore both the influence of the social context on children's understanding and the contribution of individual participants to the development of social knowledge (Winegar, 1988). Winegar suggested that the concept of co-construction more accurately described the contributions of environment and individuals to

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understanding of social events. This criticism of the script concept suggests the importance of investigating children's perceptions of school learning experiences in the context in which they develop instead of relying on interview methods to recall events. Support for this approach is found in studies of children's use of play scripts in natural play settings (e.g., Goncu, 1987; Nelson & Seidman, 1984) which reveal both the utility of the script concept for explaining regularities in children's play and the everyday experiences which can modify scripts.

A similar shift from reliance upon interview methods to the use of designs which feature natural classroom settings is evident in metacognitive studies of young children. Early studies of metacognitive development which used interview methods had found that young children were deficient in their knowledge and control of thinking and learning processes (Bjorklund, 1989). When a broader range of methodology was used to investigate young children's metacognition, evidence of early use of metacognitive-type behaviours began to accrue. Cullen (1991), for instance, identified indicators of young children's early metacognitive strategies in everyday classroom settings. Pramling (1990), Allen (1993) and Cullen (1995) incorporated metacognitive teaching interventions into early childhood programs with positive outcomes for children's awareness of their own learning. Addition to emphasising the value of studying metacognition in early childhood classroom settings, these studies illustrate how classroom experiences affect early conceptions of learning.

Interest in peer scaffolding has evolved from the social constructivist theories of Vygotsky, Bruner, Rogoff and others. Although theoretically the notion of peers guiding and assisting each other's learning activities is compelling, the mechanisms involved in scaffolding are by no means clear cut (Stone, 1993; Day, Cordon & Kerwin, 1989; Wertsch & Ulviste, 1992), nor is the effectiveness of peer tutoring clearly established (Tudge, 1992). In the present study, in so far as peers contribute to the dynamics of classroom life, it was expected that detailed observations of new entrant children would be likely to reveal evidence of peer guidance and support in their first weeks at school.

The above areas of research suggested the need for us to design a qualitative study in the natural classroom setting which used both observational and informal interview methods to tap the learner's perspective. Reviews of young children's perceptions of school (Klein, Kantor & Fernie, 1988) and perceptions of learning (Cullen, 1992) have concluded that interviews can play a limited but important complementary role in classroom studies of young children. In sum, theoretical and methodological considerations led us to adopt an ethnographic approach to the study of children's early perceptions of school learning.

METHODOLOGY

Participants

In accordance with the ethnographic focus on studying a particular culture, one new entrant (NE) classroom catering for five year old 'new entrants' formed the context of the study. Eight target children, four boys and four girls, were selected on the basis of time of entry to school. Four children commenced school near the end of Term 1 and four children commenced school during Term 2 after mid-term break. The two researchers (Cullen and St George) acted as participant observers in the classroom during the second term and part of the third term.

Procedures

A critical feature of the methodological approach was the researchers' shared theoretical interest in the social, situated nature of learning. This background enabled them to observe independently in the same classroom using a similar 'lens' on events. A second important feature was their shared knowledge of the classroom dynamics and participants which allowed them to bring a dual perspective to the data collection and data reduction processes. At each stage of the study, the

researchers met regularly to consult about procedures, data and interpretations. The dual researcher approach provided ongoing investigator and methodological triangulation (Cohen & Manion, 1980) throughout the study.

During the children's first term at school (Term 2), each researcher observed two target children during the first half of the term and two target children during the second half of the term. The first set of four children was observed for an average 4.5 hours, the second set for an average 3.6 hours. Observations were conducted in the morning when literacy-related activities were taken by the new entrant teacher. Researchers kept narrative records on each target child, alternating observations, one child before morning recess and one afterwards. They talked with children informally to elicit perceptions of learning tasks when this did not interrupt ongoing activities. Focused interviews were conducted with all children towards the end of the school term. Each child was observed for a further 1.5 hours (average) in the third term during the first part of the afternoon when thematic activities were taken by the senior teacher. The following year, the researchers visited the children in their junior classrooms (JC) towards the end of the year, talking informally with children and conducting structured interviews. The researchers observed in each of the two classrooms and recorded notes on routines and classroom activities in order to establish a shared picture of classroom life.

Data analysis

Each child's new entrant observations were coded sequentially to retain dynamics of classroom life. Coding categories were initially theoretically derived but modified in order to more accurately portray data. Examples of coding include: peer social interaction; scaffolding - giver, scaffolding - receiver; response to demands, task-oriented - individual. Interviews were tape-recorded and transcribed and transcriptions were read and reread to establish themes. At each stage, the researchers discussed emergent concepts, theoretical interpretations and decisions about data reduction. The theoretical constructs of scripts, metacognition and peer scaffolding provided a theoretical framework for the data reduction processes.

RESULTS

The new entrant learner

The observational data are presented elsewhere (Cullen & St George, 1995) and are not a major focus of this paper. The model of peer interactions developed by Cullen and St George (Figure 1) is presented here in order to establish a framework for the follow-up data.

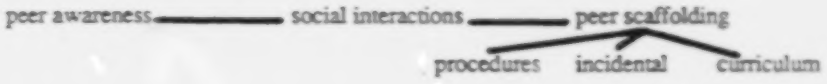

Figure 1: Model of peer interactions

In their first weeks at school, the new entrant children revealed a variety of peer-related behaviours, ranging from simple awareness of peers through to incidents of peer scaffolding, both as giver and receiver. Sequentially, the data revealed that children moved from simple awareness of peers as a source of information to accepting the role of receiver of peer scaffolding and, finally, to giver of scaffolding as less experienced peers joined the classroom (Cullen & St George, 1995).

The rich peer life in the new entrant classroom, illustrated in Figure 1, operated primarily outside of the teacher-directed curriculum activities. There was a strong focus on socialisation in the

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classroom with the teacher emphasising procedural aspects of classroom life. While this procedural focus appeared to limit children's awareness of learning, it did appear to facilitate children's attempts both to give and receive scaffolding. For example:

> One morning when children are writing news stories at their tables, the teacher stops the class to say, 'I don't accept scribbling'. During a later observation when J is in his fourth week at school, he asks his neighbour C, 'Is that scribble?' C says, 'That's messy'. J rubs out 'scribble' and recommences his story.

In the following incident, scripted knowledge which reflected the teacher's procedural instructions, was used by a peer to guide a new and inexperienced learner.

> When children have finished assigned activities, they choose spare-time activities from around the classroom. the whiteboard, on which they practise writing with textas, is a popular choice. K is laboriously writing letters of her name, then starts to make a border. D says, 'You're not allowed to colour in'. K to D, 'It's none of your business' but rubs out marks and starts rewriting her name.

Despite the salience of peers in the classroom life of new entrant children, their interviews indicated little awareness of peers in the learning process. Learning as a concept was largely associated with the teacher as the following response indicates.

> K was asked how she knew what to do in her writing book when she first started school. She responded, 'The teacher showed me'. Peers did not enter into K's descriptions, although observations revealed that she frequently observed other children's actions on similar tasks and was both giver and receiver in scaffolding situations.

Further, there was little awareness of self as learner, although children were observed using metacognitive-type strategies such as checking the alphabet card while writing and peer prompts to use the cards were common at writing tables. Confusion about the concept of learning may have contributed to this anomaly. For instance:

> When M was asked about what she learned at school, she responded 'to don't make a mess any more'. M was unable to elaborate about learning in relation to questions about activities at tables (teacher-assigned), choosing activities (spare-time), inside versus outside or play versus work although, in an earlier conversation with the researcher about a drawing of her sisters at home, she had indicated a clear awareness of her role in helping a sibling to learn. M frequently engaged in procedural-like behaviours such as fiddling with her pencil case, returning objects to her bag and rubbing out.

The junior class learner

The two junior classrooms to which the target children moved the following year provided contrasting learning environments to the new entrant classroom. Our initial view was that Classroom 1 maintained a strong, effective focus with the teacher emphasising social cohesion and feeling happy and positive, while Classroom 2's teacher provided a stronger cognitive focus by encouraging children to think and ask questions and to use complex terminology. We subsequently concluded that significant similarities were apparent, also. Both classrooms provided contexts for individual and collaborative activities and support metacognitive growth. Children were eager to describe classroom tasks and learning activities associated with classroom displays.

Interviews with the target children illustrated several developments in their perceptions of learning. First, in contrast to the new entrant interviews, the children now revealed a much greater awareness of peers in the learning process. The value of learning is also indicated. For example:

> N describes buddy reading, 'Like on reads, one listens, one reads, one listens ... then when you are an adult you can read stories to your children'.

K, however, highlights the negative side of some peer interactions:

> 'I help them do their work ... help put out the car mat. There are too much boys playing that game.' A plausible reason for the teacher's focus on social cohesion is reflected in this example.

A second feature was the extent to which children's descriptions of learning reflected the minutiae of classroom life. In the following example, a classroom activity is described in answer to a question about a car graph in K's scrapbook:

> 'We went to the carpark and we chose five different colours and we began to try and find out how much coloured cars they have and then we came back to the classroom and graphed the cars.' Later in the conversation, K's awareness of the knowledge she had gained about graphs was revealed when she differentiated line graphs and bar graphs in the charts she had made.

That 'learning' was beginning to convey meaning is illustrated in the following example in which J is asked about what he knew about hedgehogs when he was showing the 'hedgehog' he had made for the school's science fair:

> 'I saw a hedgehog on the road. It was squashed cos they go out at night.' The next week, when asked to recall the hedgehog experiment, he said firmly that he had learned 'nothing - I learned something about those ... how to make wheat grow'. This seemed a realistic assessment of the learning task - making a hedgehog out of wheat taught J nothing about hedgehogs and he was clearly aware of this.

Children's emergent concepts of self-as-learner were now reflected in their descriptions of learning, as the following descriptions of learning strategies indicate:

- learn on your own, in my head
- read the words at the top
- ask someone you think might know
- a friend might help you think together
- you might need a dictionary
- you learn to be better and better
- you get to use it and then you know it
- sometimes we do hard ones and then we get to learn them, work them out

Awareness of self-regulation, knowledge of learning strategies and collaboration with peers all indicate emergent conceptions of learning as a dynamic concept rather than a static script.

Table 1 provides an overview of children's perceptions of school learning, as revealed by NE and JC verbal data. Dimensions of the perceptions are grouped according to the three theoretical constructs of scripts, metacognition and peer scaffolding.

TABLE 1

THEORETICAL DIMENSIONS REFLECTED IN CHILDREN'S STATEMENTS ABOUT LEARNING

Child		Scripts	Metacognition	Peer Scaffolding
K	NE	she shows us what to do	you have to copy off the top	just the teacher
	JC	we always read together	practise writing concentrate	they want help - to get on the menu
J	NE	it's writing she's not a teacher	leave a line	no (re peers)
	JC	how to make wheat grow	look in the balloon (word chart)	ask my next door neighbour
A	NE	I make a cinderella book; we do it	if you can't read it put a line under	H could show me; he's a good reader
	JC	she gets hard ones (math cards) I learn	a book on dogs - do they have birthdays	then they try if it's k - I tell them
N	NE	I like doing learning - reading	ask a teacher my mind helps	they help me spell words
	JC	to learn how to be an adult	complicated - you need Oxford dict.	I can spell it for them
T	NE	teacher does ABC cards	I think	they have to do their own work
	JC	we just decide it ourselves	you sound it out and it might be right	I ask them to help me and they do

TABLE 1

THEORETICAL DIMENSIONS REFLECTED IN CHILDREN'S STATEMENTS ABOUT LEARNING (continued)

Child		Scripts	Metacognition	Peer Scaffolding
D	NE	writing reading little books	do a line	teacher helped me I don't have friends
	JC	go to reading boxes and we play school	sound it out	we each helped - it was T's idea
M	NE	have to sit on the mat	I don't know how to do it	I share my rubber
S	NE	make trees and flowers, colour in	teachers tells us what to write	with the tricky ones

In each dimension, there is a broad shift from reliance upon the teacher and routines to awareness of a more self-regulated approach to learning.

The researchers' summary notes on the children at the end of the NE year concluded that five of the eight original target children (K, A, N, T, D) were gradually adjusting to school learning. The following year, J, although still presenting signs of learning difficulties, was revealing a clearer understanding of the concept of learning and was better integrated in classroom life. M and S, who were still confused about school learning towards the end of the NE year, moved to other schools.

CONCLUSIONS

In the new entrant classroom, the teacher's focus on procedural aspects was reflected in children's scaffolding attempts and views about scaffolding. Knowing 'what to do' was important for these school beginners. In this regard, the teacher's emphasis on procedures and explicit directions apparently facilitated children's acquisition of scripts for classroom life. Their perception of learning as doing assigned classroom tasks and following procedures is consistent with Pramling's (1990) hierarchical model of conceptions of learning which identifies three levels as learning 'to do', 'to know' and 'to understand'. In the NE classroom, teaching style did not assist children to move towards a conception of learning as knowing or understanding, although a recent study of metacognitive interventions with four year olds (Prince, 1994) indicates that this movement is possible with very young learners. The focus on routines and procedures is consistent with other qualitative accounts of classroom life (Marshall, 1990; Robson, 1993) which identify an orientation towards work rather than learning in some primary school classrooms. The continued focus on socialisation in the present study seems to be associated with an admissions policy which allowed children to commence school throughout the year rather than at a single entry point.

The JC interviews revealed a greater awareness of learning as knowing or understanding. These perceptions reflected learning tasks and experiences both in classrooms and at home. Teaching

styles appeared to support a greater understanding of content knowledge such as graphs. Resources and teaching practices supported the use of metacognitive strategies and this was consistent with the strategic knowledge reported in interviews. JC interviews also indicated greater awareness of peers as part of the classroom life. Earlier, we had been surprised at the limited peer awareness in NE interviews, given the major orientation towards peers revealed in the observational data. Although we cannot entirely discard a developmental explanation for the NE-JC differences, the fact that both JC learning environments featured planned opportunities for collaborative learning does suggest there is a need for teachers to structure peer learning and acknowledge the value of peer assistance if this is not to be perceived by children as part of school learning. Activities such as buddy reading and graphing provide such contexts for shared learning. Observations also indicated that in each classroom the computer served as a positive stimulus for peer interactions, for example, showing how to save a document or reading computer stories. Interview descriptions supported the researchers' positive view of the computer as a stimulus for peer scaffolding.

Theoretical propositions

The data suggest two propositions about the nature of early learning experiences which contribute to a revised model of scripts for school learning:

- Children look for patterns in their classroom life and construct scripts for school learning which reflect the changing dynamics of classrooms; and
- Peer interactions provide valuable opportunities for establishing relationships with other children which support emergent forms of scaffolding, including metacognitive assistance to peers.

Scripts for school learning - a revised model

As reported by Fivus (1984), young children rapidly acquire scripts for school learning in their first year of school. In the present study, this process was initially facilitated by the teacher's emphasis on socialisation and the work orientation of the classroom. However, the limitations of this procedural emphasis were also apparent in children's limited concept of learning.

In the junior classrooms, the cognitive orientation and support for metacognitive development apparently yielded greater awareness of self-as-learner. In turn, children constructed more flexible scripts for learning which reflected their diverse learning experiences, including those with peers. When the teacher also focused on social cohesion, negative peer experiences could also be incorporated into scripts involving peers. Children still responded to regularities and patterns reflected in script like descriptions of learning, but increased awareness of their own role as an agent in learning and of purposes of learning (to acquire knowledge and to understand) produced multiple perspectives on learning which did not conform to the original script concept. In other words, children began to construct their own dynamic scripts in terms of their emergent understanding of learning. An implication of this model for teachers is that classroom life needs to support the construction of scripts for learning and not simply scripts for routines and procedures. Accordingly, teachers need to be aware of the dynamic classroom processes which affect children's perceptions of learning, particularly their own role in creating classroom orientations to learning.

In theoretical terms, Winegar's (1988) construct of the co-construction of social events is supported by the data. The present study's contribution is to highlight the fluid nature of these social understandings as children participate in classroom life.

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